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**Manthei et al.**

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(45) **Date of Patent: Apr. 6, 2004**

(54) **RETAINING WALL BLOCKS AND RETAINING WALLS CONSTRUCTED FROM SUCH BLOCKS**

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(22) Filed: **Apr. 11, 2001**

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**Related U.S. Application Data**

(63) Continuation-in-part of application No. 09/670,924, filed on Sep. 28, 2000.
(60) Provisional application No. 60/232,526, filed on Sep. 14, 2000, and provisional application No. 60/156,889, filed on Sep. 30, 1999.

(51) **Int. Cl.**[7] ..... **E02D 29/02**; E04B 2/32
(52) **U.S. Cl.** ..... **405/284**; 405/262; 405/286; 52/169.2; 52/592.6
(58) **Field of Search** ..... 405/15, 16, 21, 405/23, 25, 31, 33, 110, 114, 262, 284–286; 52/169.1, 169.2, 283, 284, 286, 592.6, 603–607

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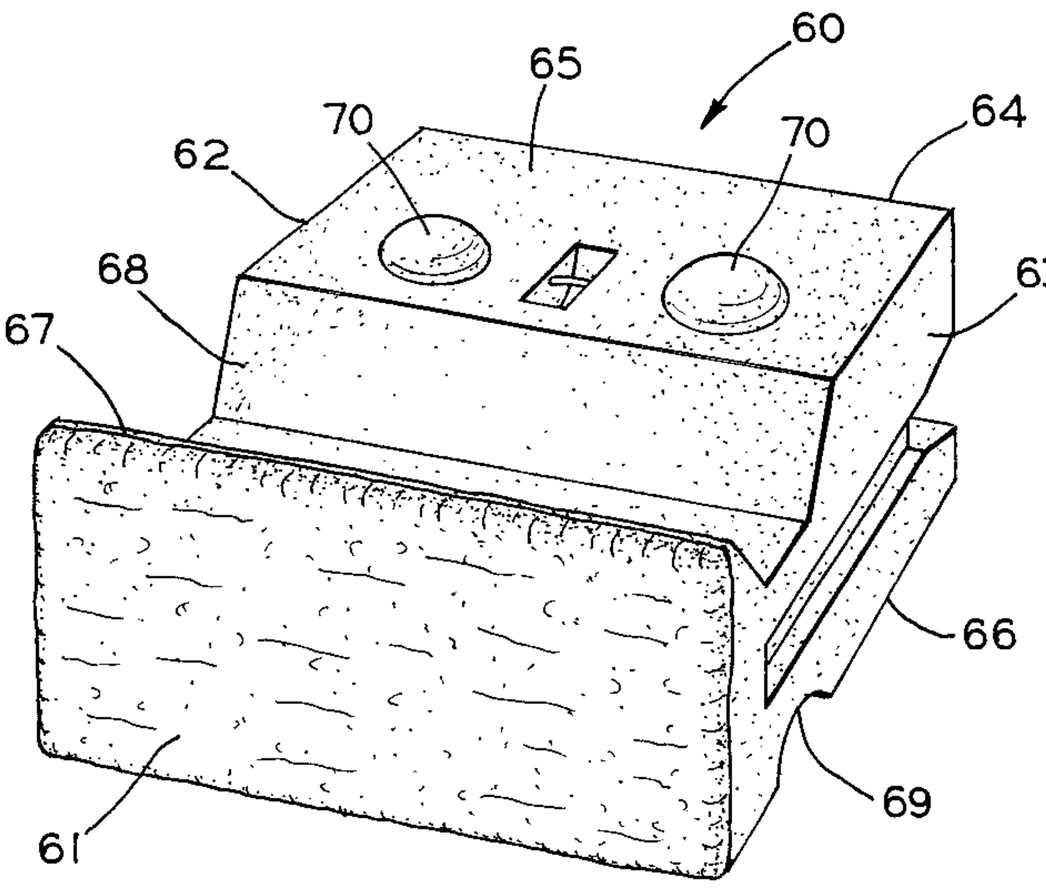
*Primary Examiner*—Jong-Suk (James) Lee
(74) *Attorney, Agent, or Firm*—MacMillan, Sobanski & Todd, LLC

(57) **ABSTRACT**

Retaining walls are formed from one or more tiers of concrete blocks. Top projections on all except the uppermost tier of blocks are received in recesses in the bottom of blocks in an adjacent upper tier. The top of the retaining wall may be finished with blocks which have a surface portion recessed below an upper edge of the face of the block for extending top soil or other material up to the block face. Alternately, the top blocks may form a drainage ditch which extends along at least a portion of the top of the retaining wall. Blocks used in tiers below the uppermost tier may have troughs suitable for filling with soil and plants. The exposed faces of the blocks are textured and, optionally, may be colored to simulate the appearance of stone or rocks.

**9 Claims, 8 Drawing Sheets**



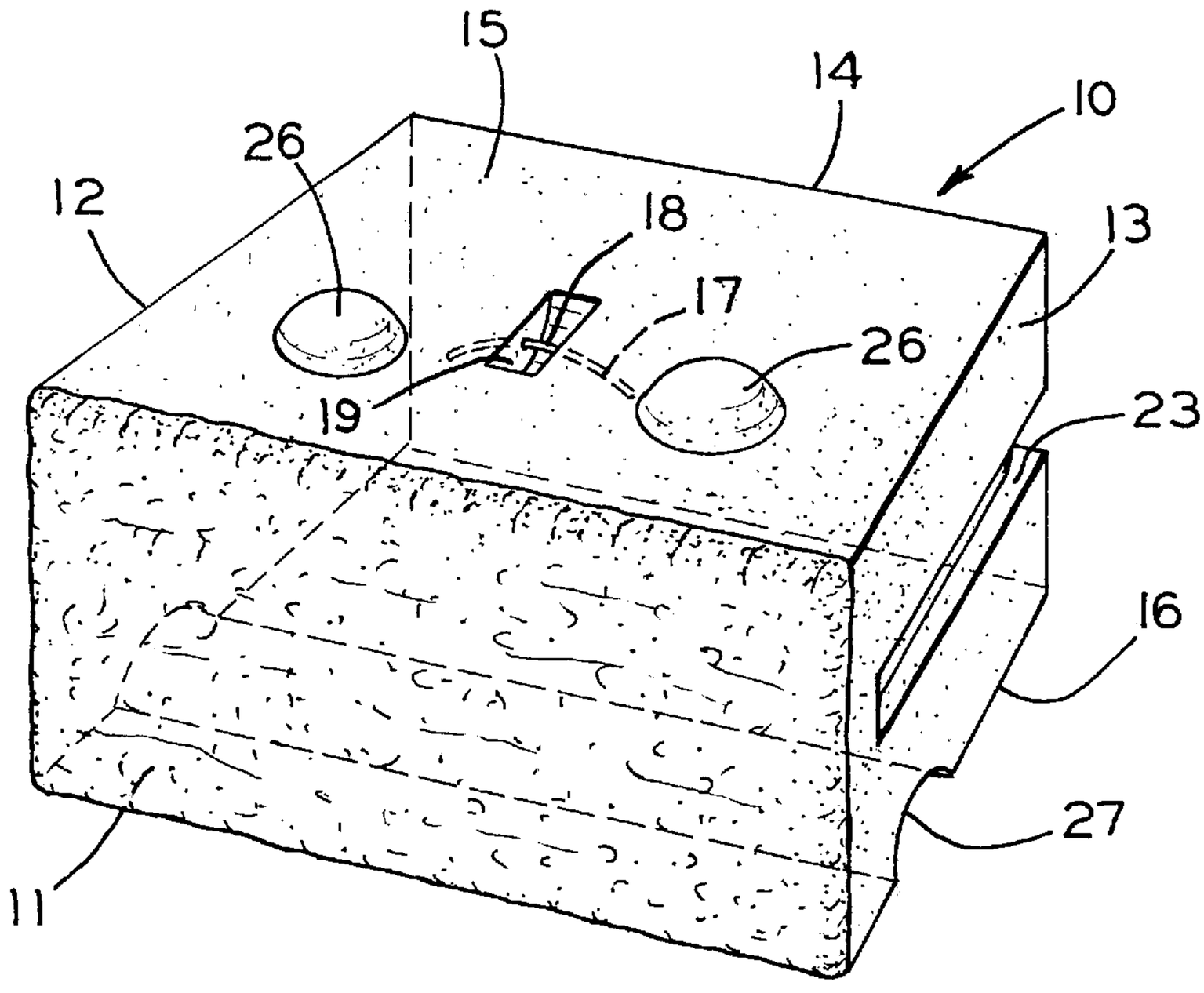

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FIG. 1

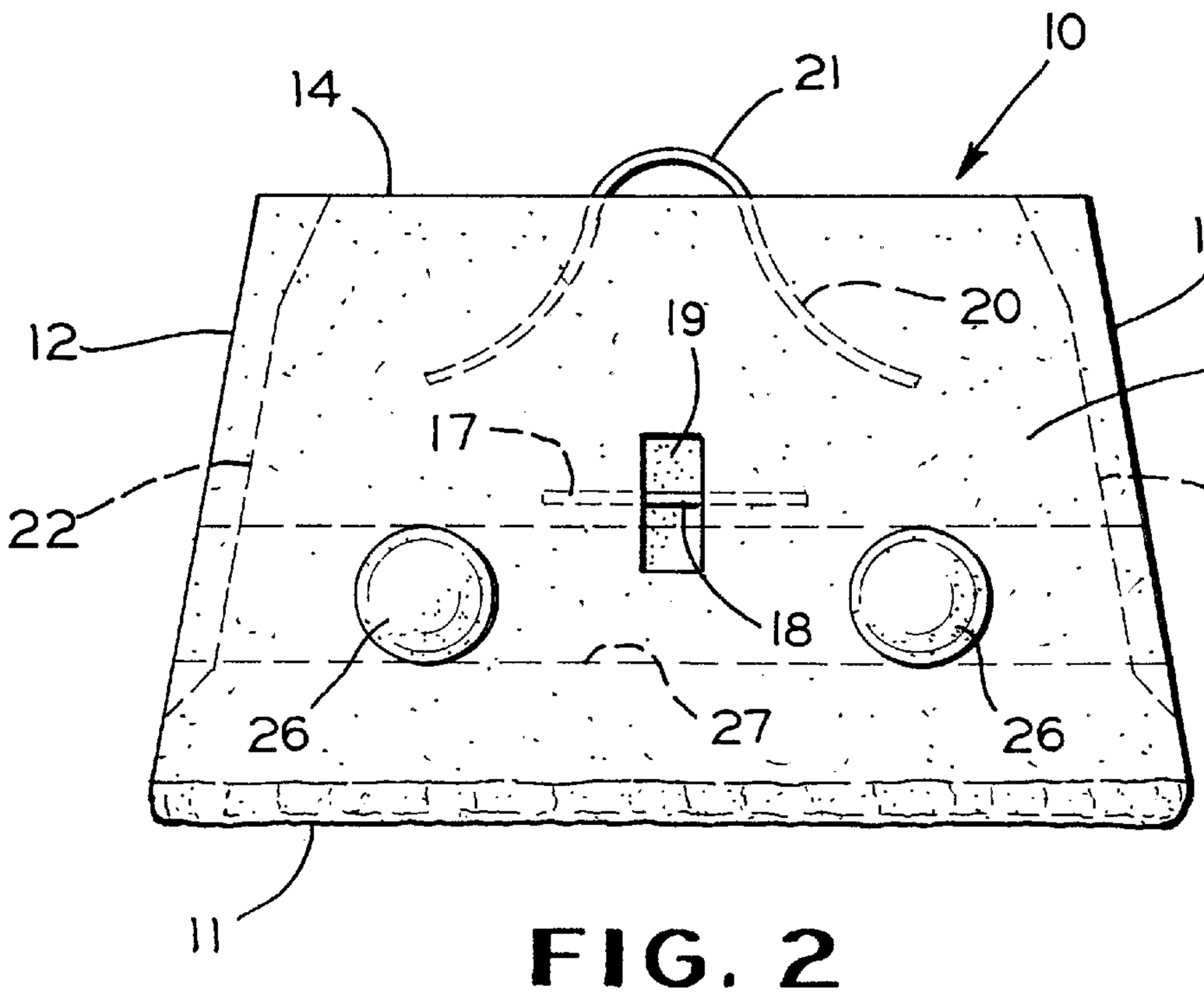
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FIG. 2

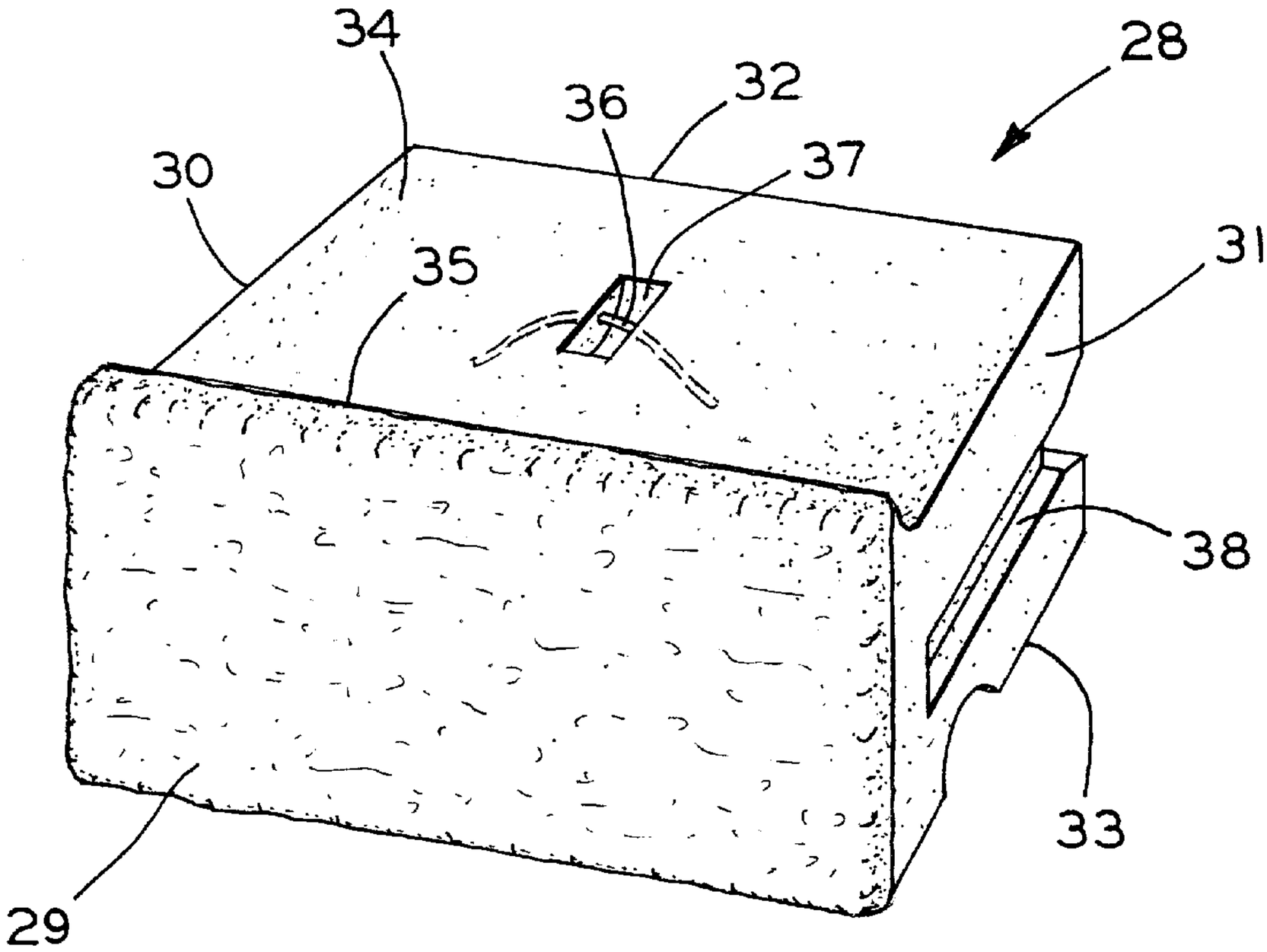


FIG. 3

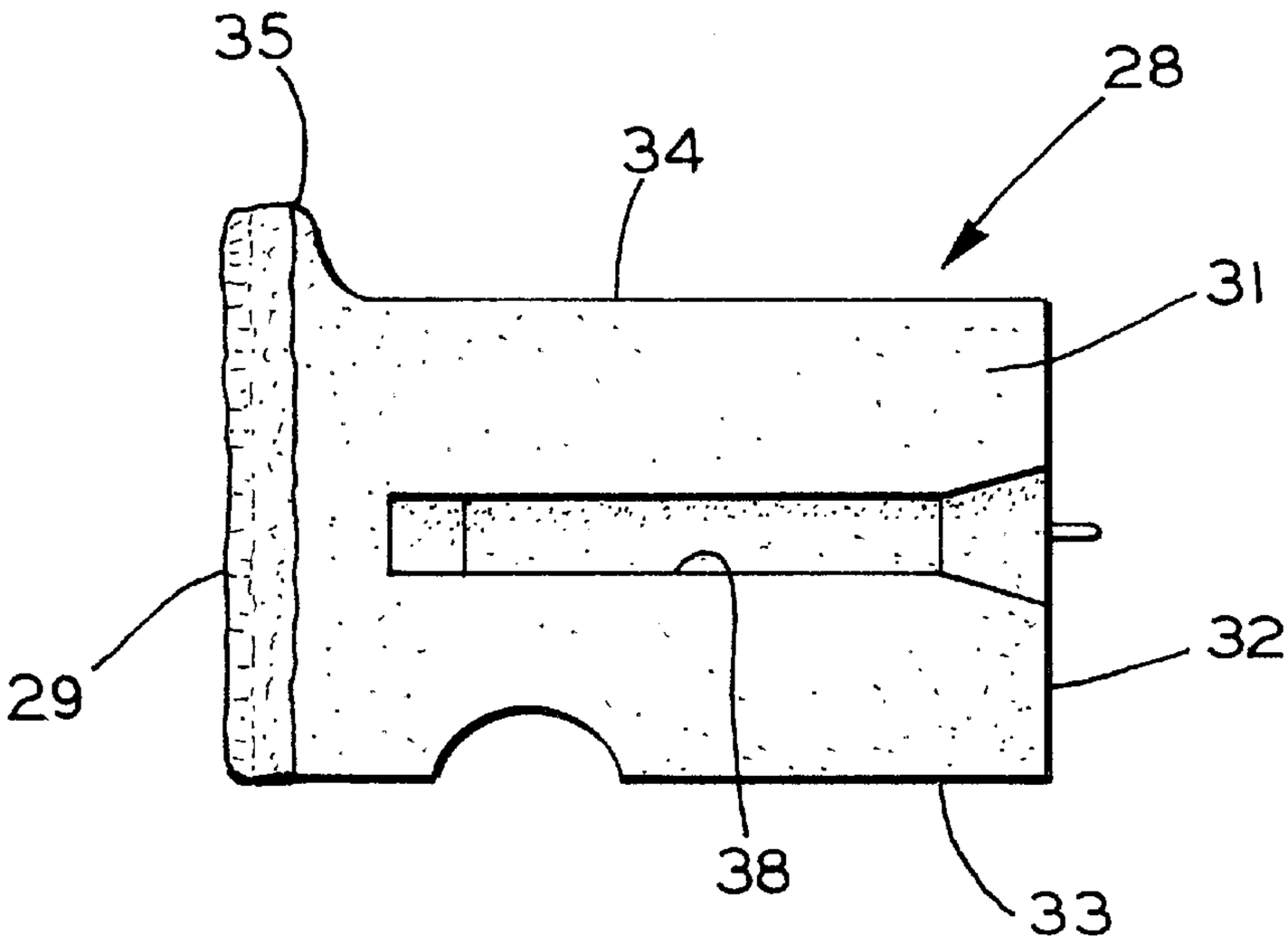


FIG. 4

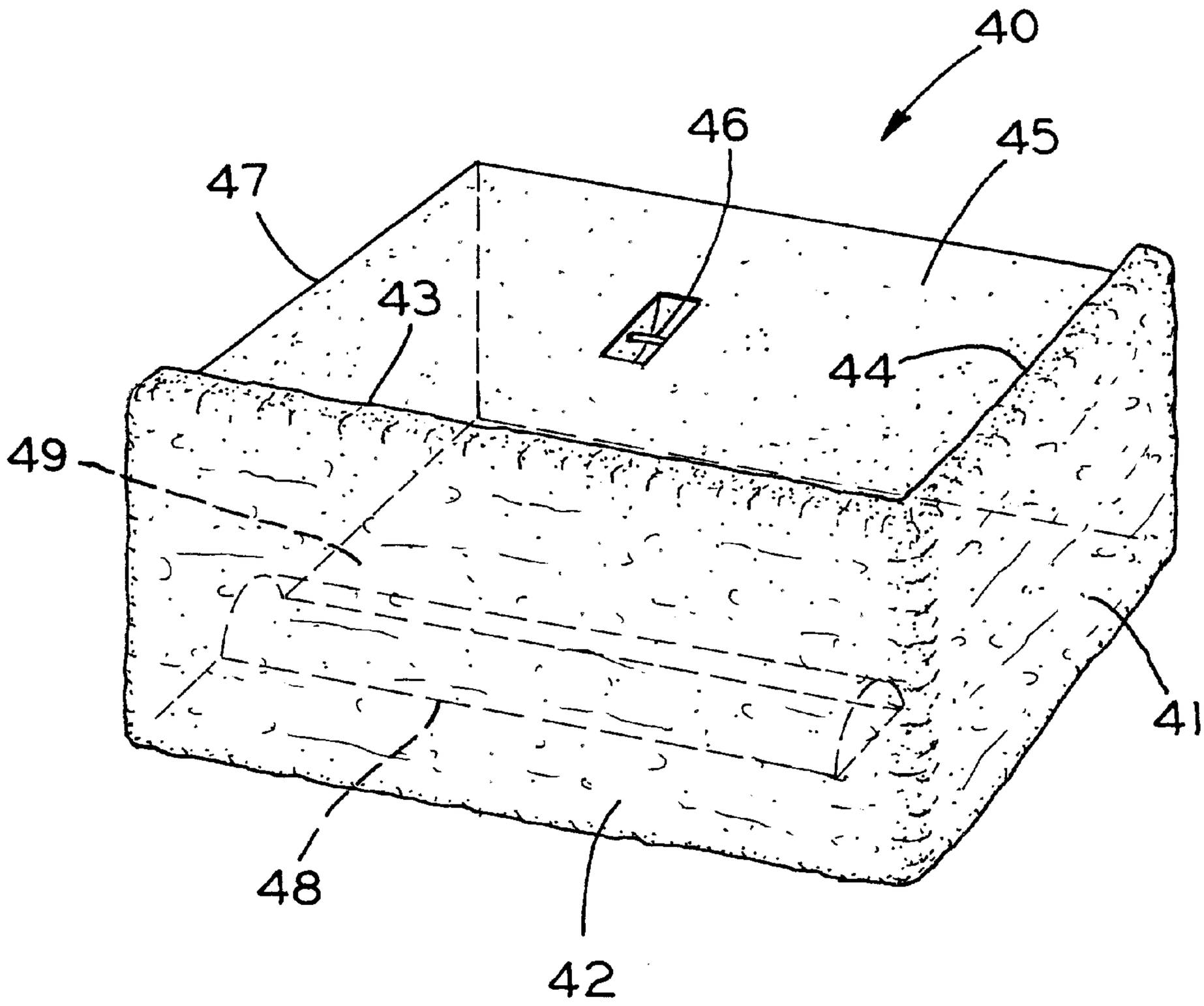


FIG. 5

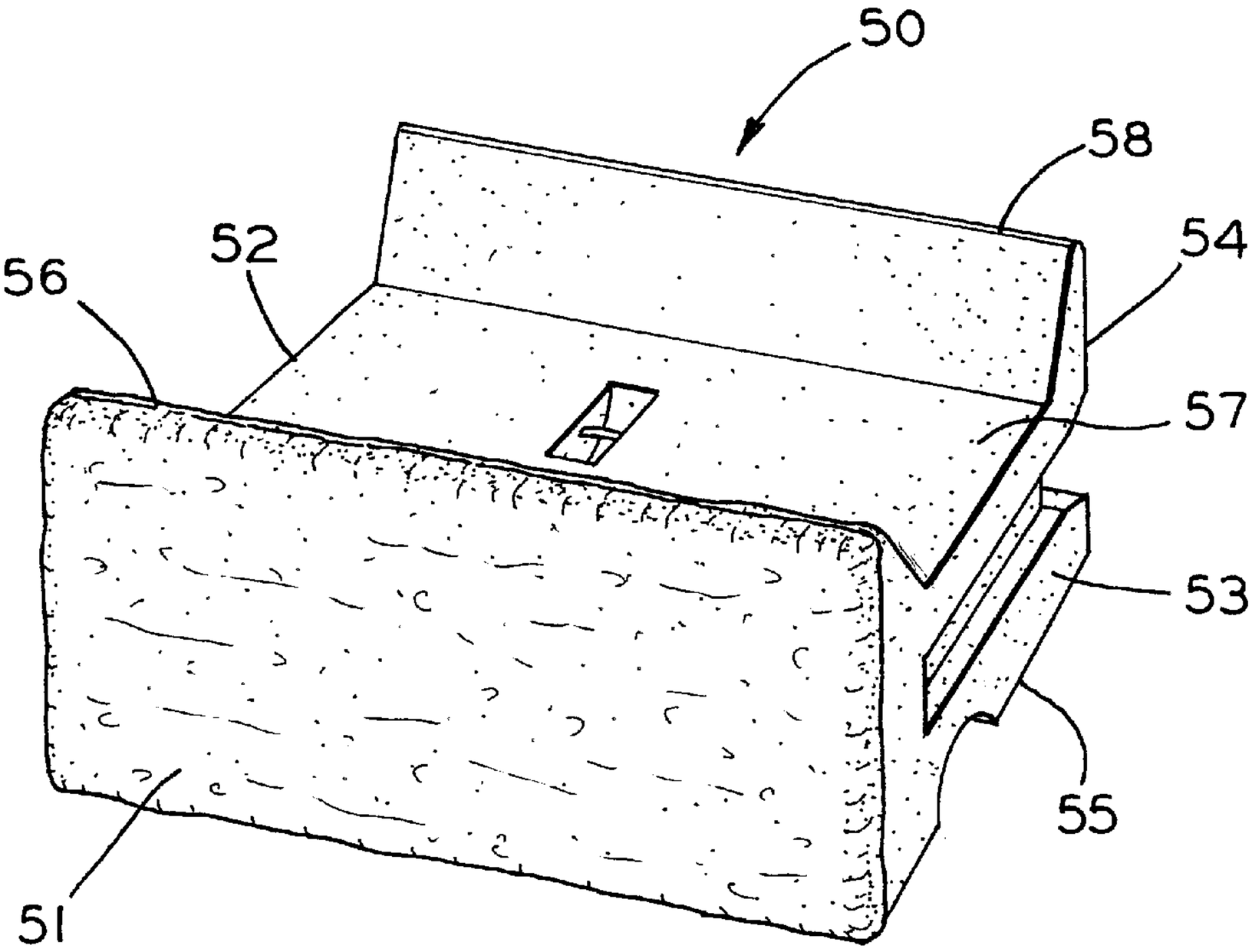


FIG. 6

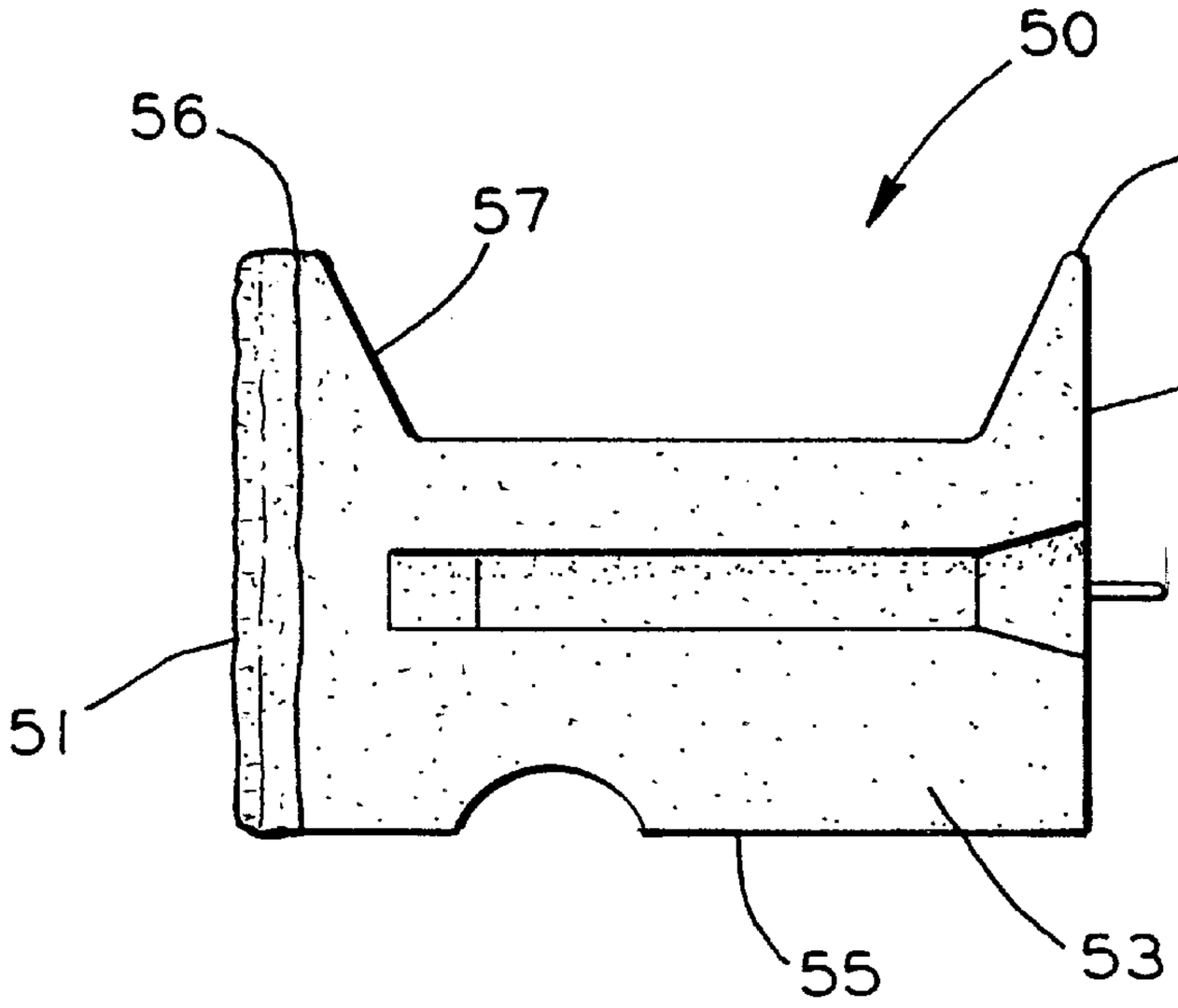


FIG. 7

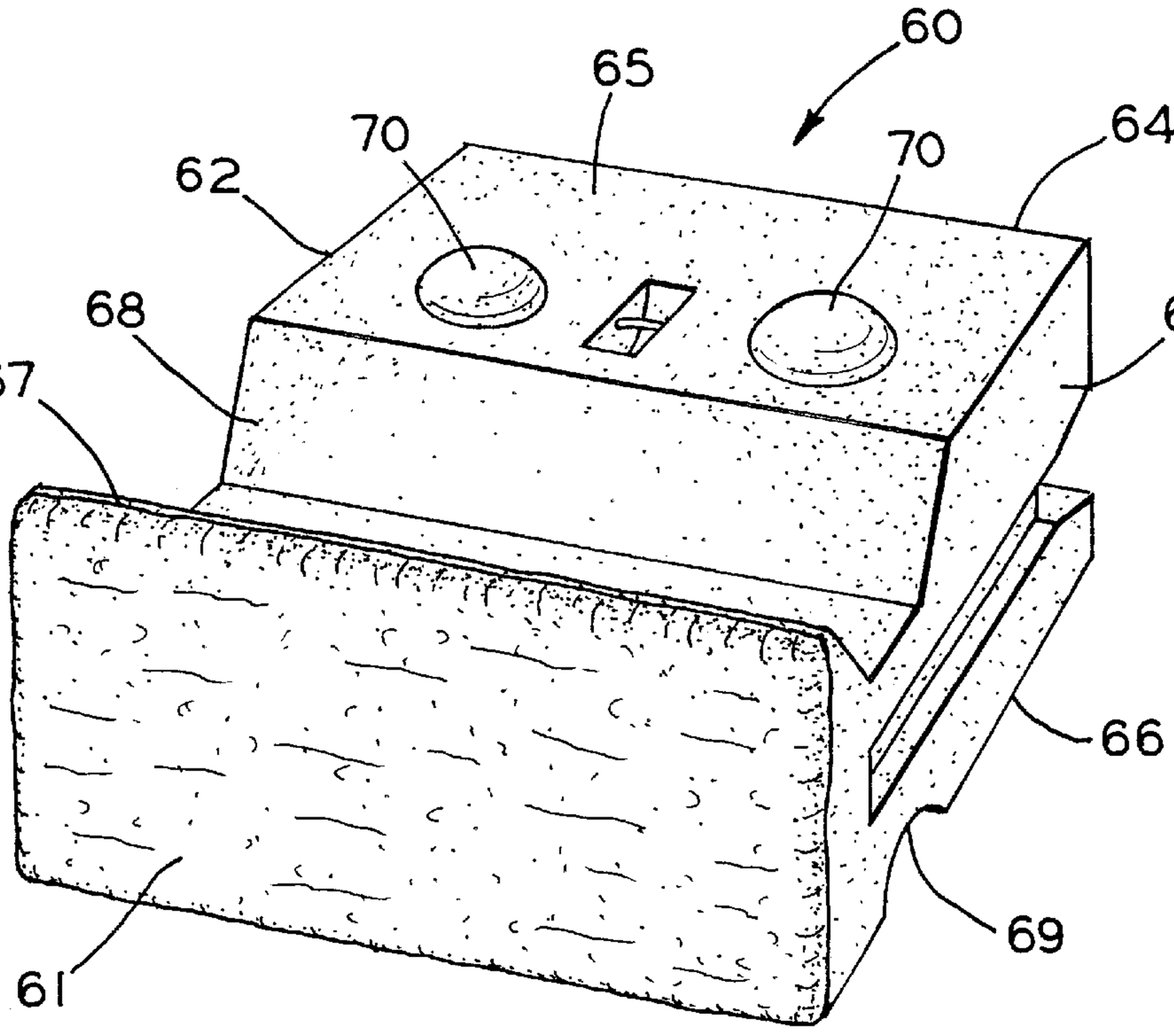


FIG. 8

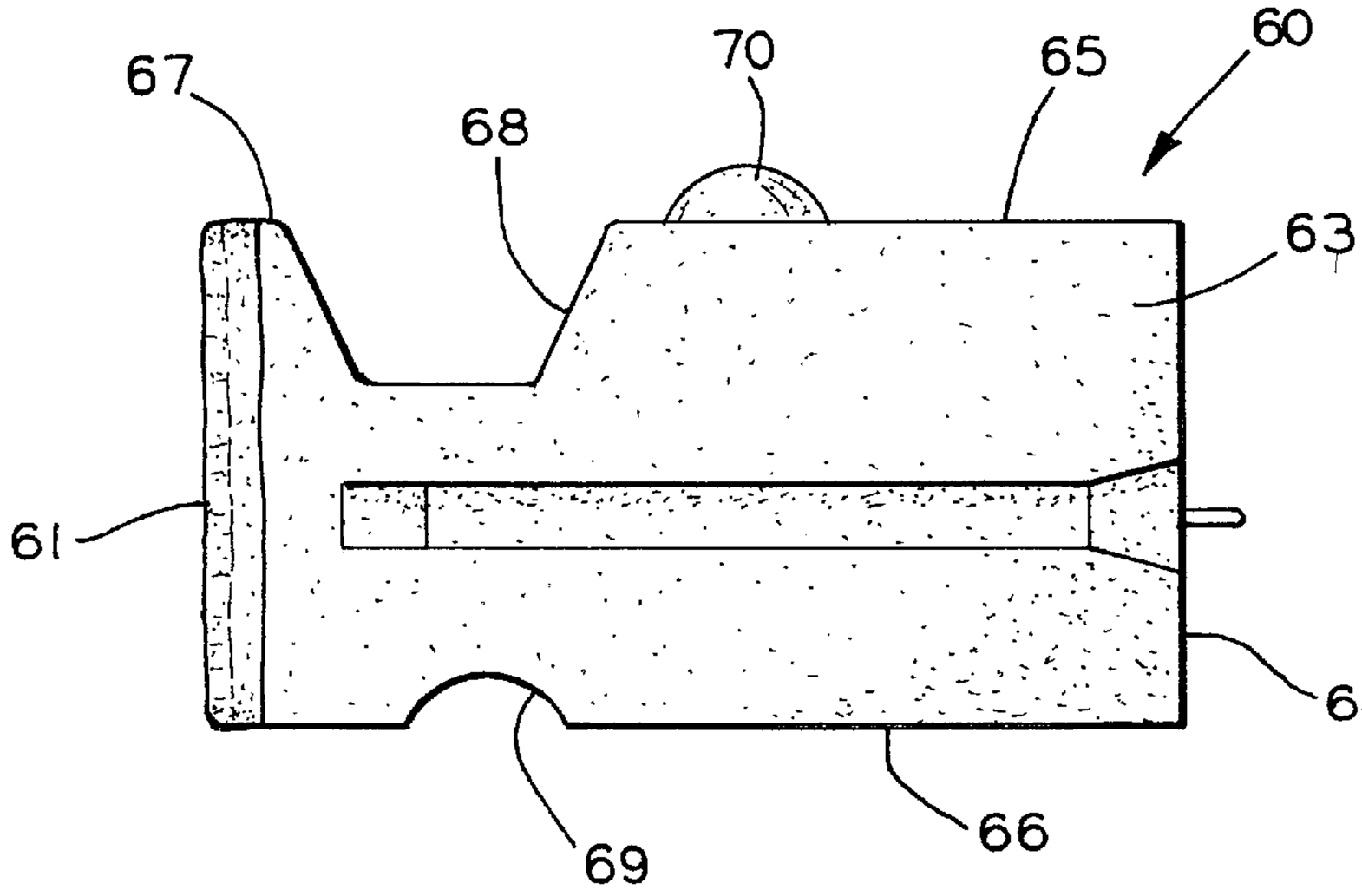


FIG. 9

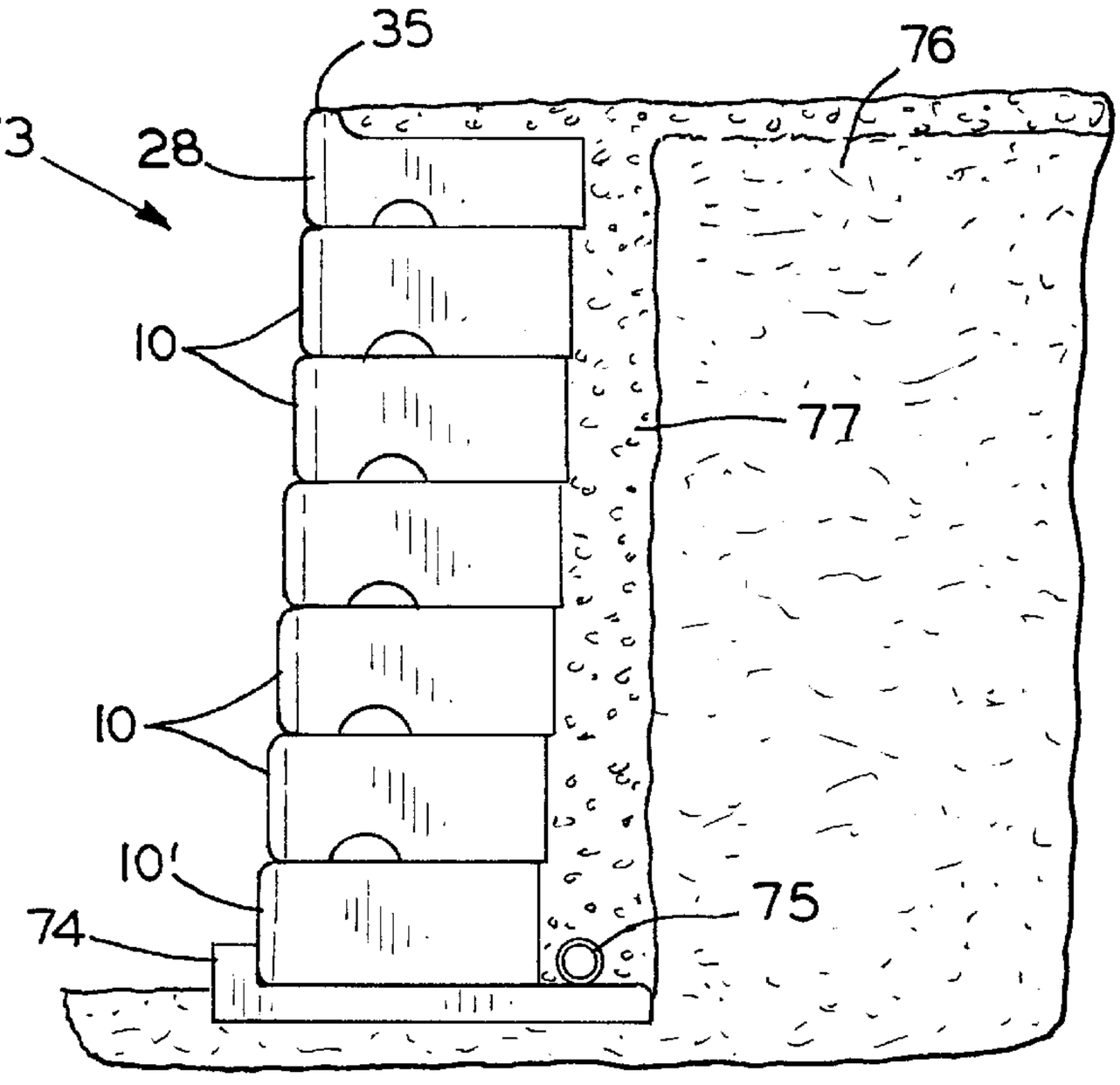
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FIG. 10

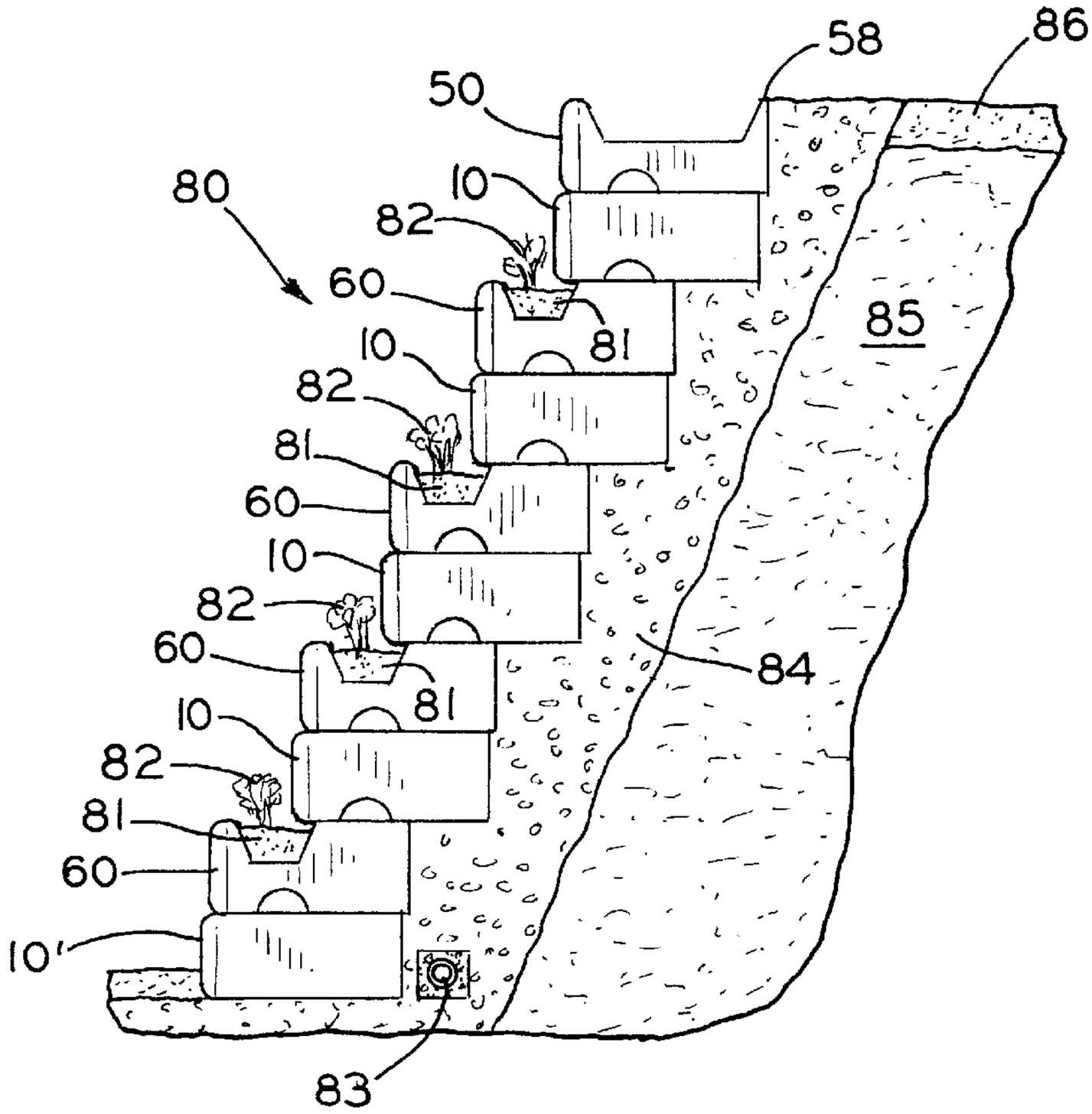
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FIG. 11

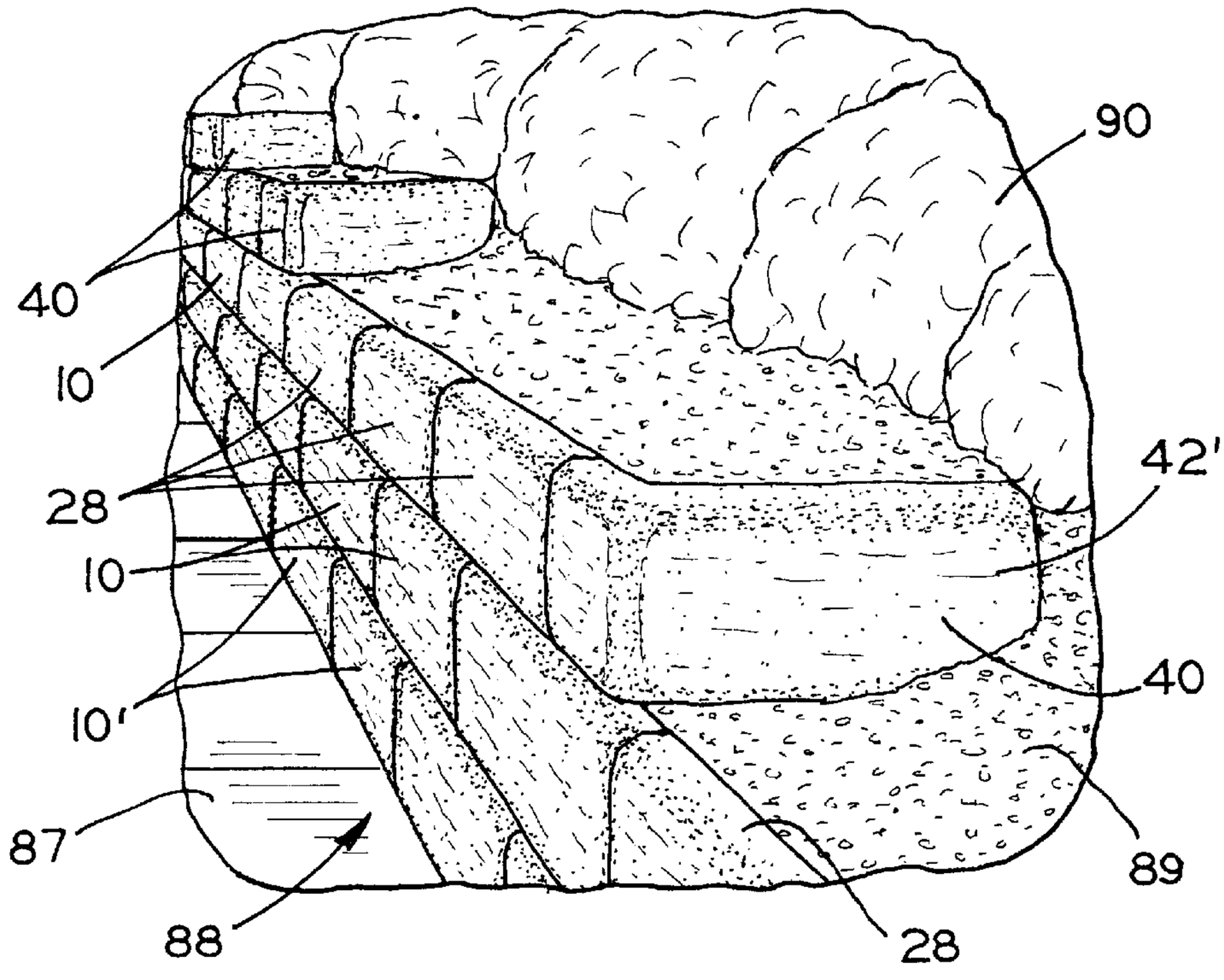


FIG. 12

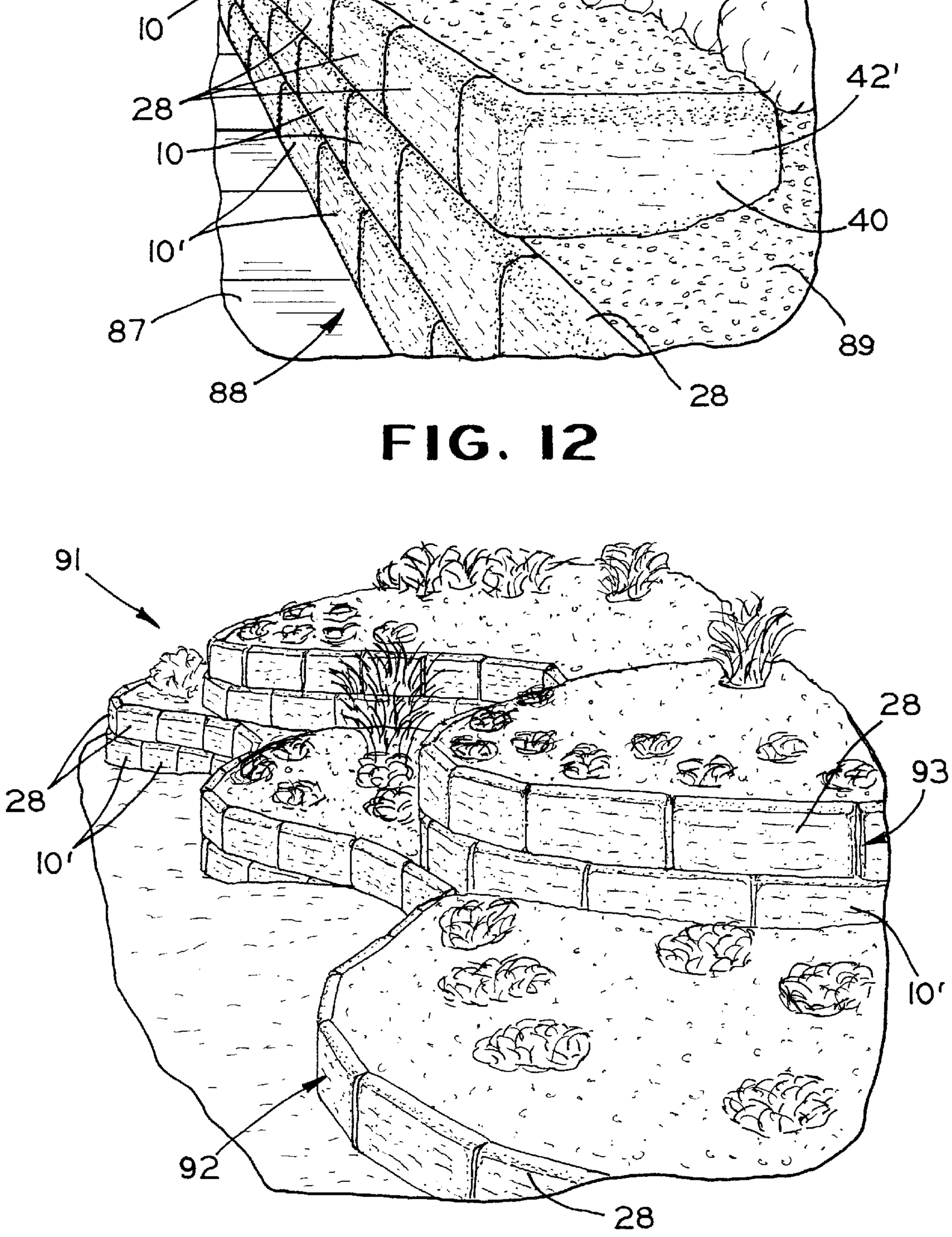


FIG. 13

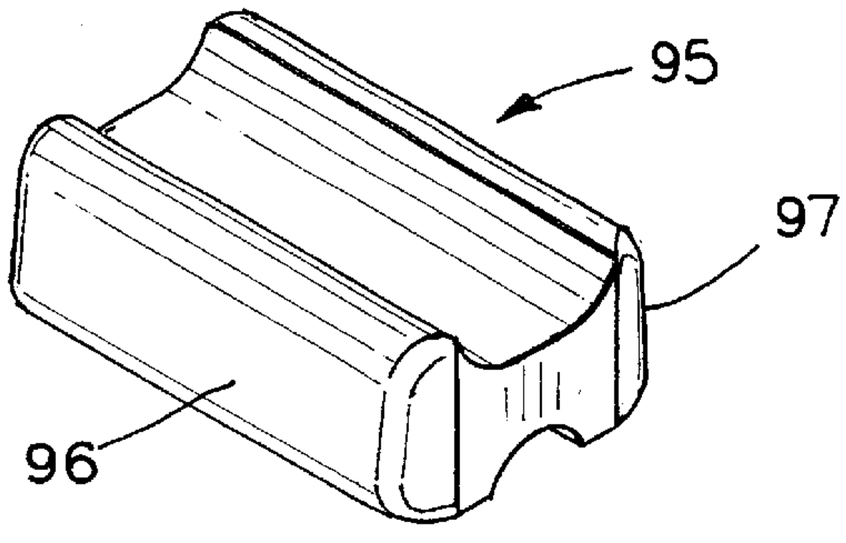


FIG. 14

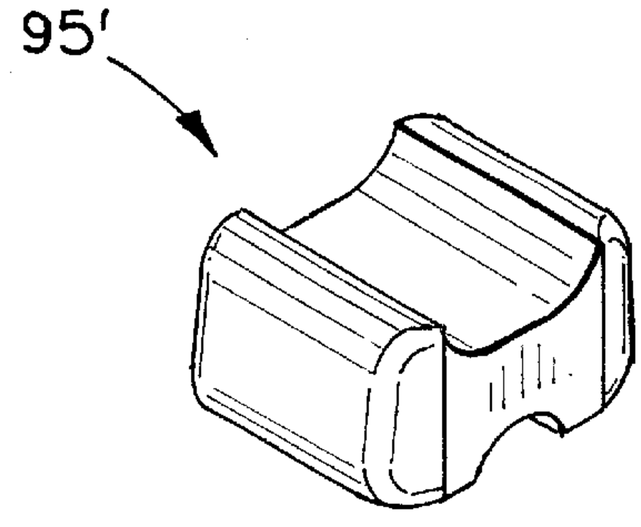


FIG. 15

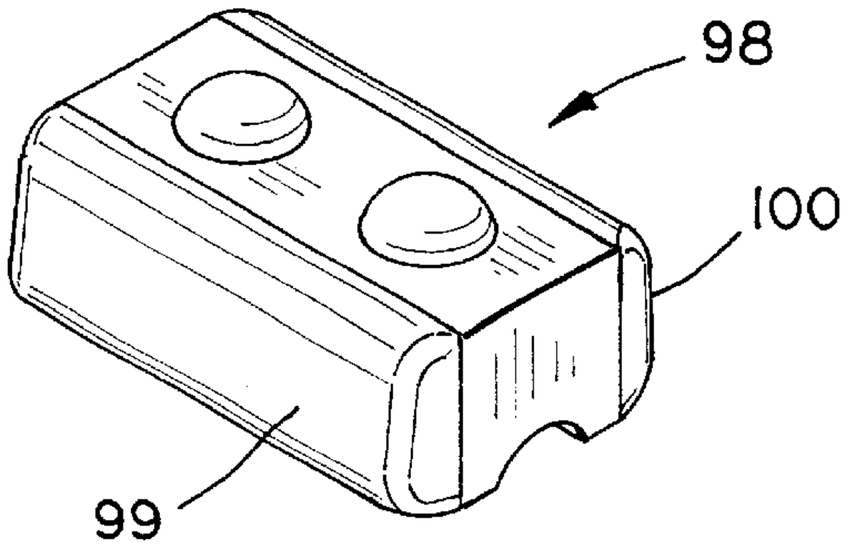


FIG. 16

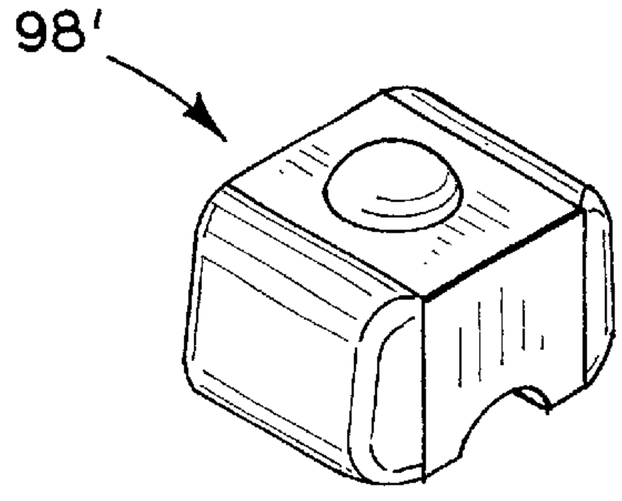


FIG. 17

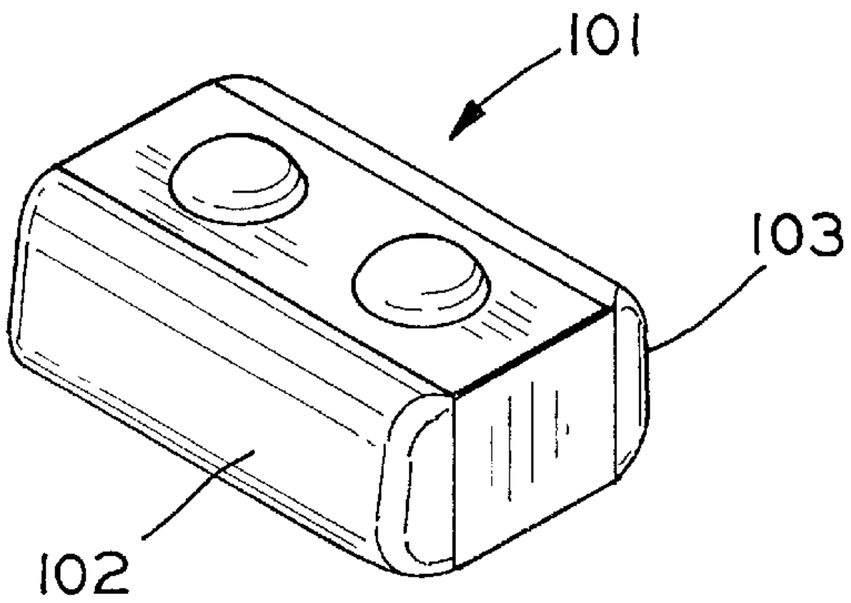


FIG. 18

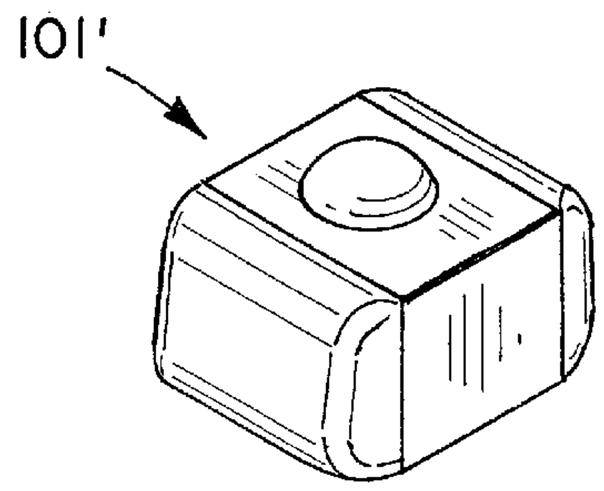


FIG. 19

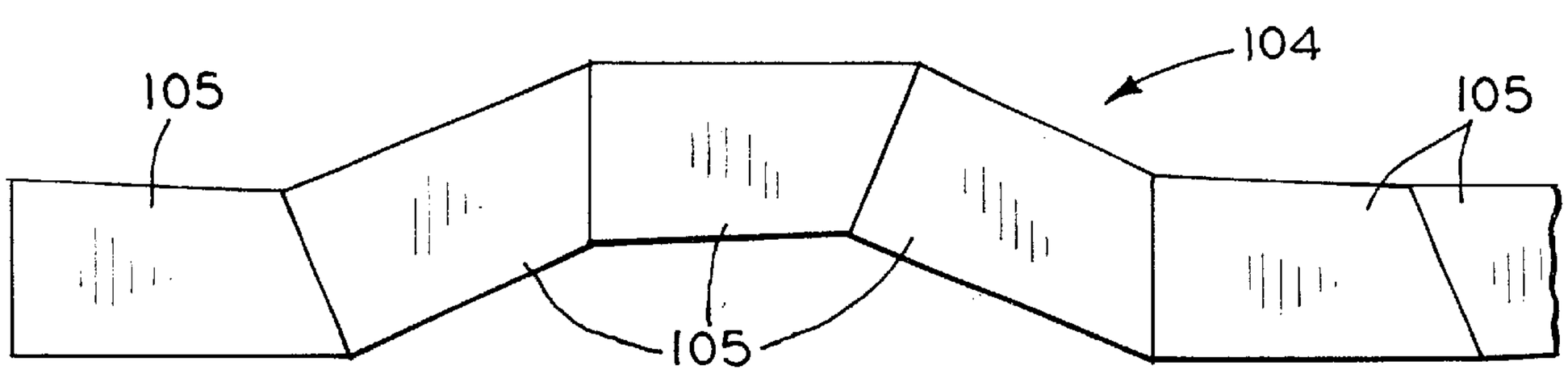


FIG. 20

# RETAINING WALL BLOCKS AND RETAINING WALLS CONSTRUCTED FROM SUCH BLOCKS

## CROSS-REFERENCE TO RELATED APPLICATIONS

Applicants claim priority to U.S. provisional patent application Ser. No. 60/232,526 filed Sep. 14, 2000. This application also is a continuation-in-part of U.S. patent application Ser. No. 09/670,924 filed Sep. 28, 2000, which in turn claims priority to U.S. provisional patent application Ser. No. 60/156,889 filed Sep. 30, 1999.

## STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT

Not Applicable.

## TECHNICAL FIELD

The invention relates to concrete retaining wall blocks and to retaining walls constructed from such blocks.

## BACKGROUND OF THE INVENTION

Concrete blocks are frequently used for constructing retaining walls. Rectangular blocks have been stacked to form a retaining wall and then back filled on one side to form a terrace. The backfill can exert a sufficient force on the retaining wall blocks to cause the stacked blocks to move out of their original position. In some cases, the blocks are stacked to form a stepped wall so that the front face of each row or tier of blocks is offset slightly behind the front face of the adjacent lower row of blocks. Further, a raised lip has sometimes been formed along the upper edge of the block adjacent the front face to prevent the stepped blocks from sliding out of position, as shown in Arvai et al. U.S. Pat. No. 5,791,827. In order to eliminate this problem, retaining wall blocks have sometimes been formed with a groove extending along a bottom surface parallel to an exposed face of the block and a raised portion is formed on a top surface to extend parallel to the front face. The groove on a stacked block receives the raised portion on an adjacent lower block for maintaining alignment of the front faces of the stacked blocks. Such an arrangement is shown, for example, in Forlini U.S. Pat. No. 5,647,185. Retaining wall blocks also may be formed with round knobs on the top surface which fit into a groove on the bottom surface of a stacked block to permit forming a curved retaining wall, as shown in Wagenaar U.S. Pat. No. 5,337,527. Another method for stabilizing a retaining wall constructed from concrete blocks is through the use of a geogrid tie back system in which the retaining wall is secured to the ground behind the retaining wall with ground anchors. The use of ground anchors for stabilizing retaining walls is shown, for example, in Kelly, Jr. U.S. Pat. No. 5,402,609 and in Wagenaar U.S. Pat. No. 5,337,517.

## BRIEF SUMMARY OF THE INVENTION

The invention is directed to retaining wall blocks and to retaining walls formed from such blocks. The retaining wall is constructed from tiers of cast concrete blocks which are trapezoidal in plan and have rectangular front faces which are textured and, optionally, colored to simulate a desired type of stone or rock. The blocks are provided with at least one top projection or knob which is received by a bottom groove in a block in an adjacent upper tier for interlocking the tiers of blocks. Preferably, the bottom groove is omitted from the blocks in the lowermost tier.



The top projections are omitted from blocks used in the top row of blocks in the retaining wall. The top blocks may have an top surface portion which is recessed below an upper edge of the front face of the blocks to allow extending top soil or other material over the top surface portion up to the front face. In an alternate embodiment, the upper surface of the top blocks is recessed below upper edges of the front and rear to define a trough extending between the sides parallel to the front face. The troughs in a row of top blocks form a drain ditch which extends along the top of the retaining wall.

Planter blocks also may be used in one or more tiers below the uppermost tier. Each planter block has a trough in its upper surface which extends between the sides of the block parallel to and adjacent the front face of the block. The knobs on the top of the planter block are spaced further behind the front face than the bottom recess, so that the front face of blocks in an adjacent upper tier are spaced behind the front face of the planter block and at least a portion of the trough is exposed. The trough may be filled with soil and plants.

In a further embodiment, the blocks are provided with finished front and rear faces for constructing a free standing wall.

Accordingly, it is an object of the invention to provide retaining wall blocks and retaining walls constructed from such blocks.

Other objects and advantages of the invention will become apparent from the following detailed description of the invention and the accompanying drawings.

## BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a perspective view as seen from the upper right front of a basic retaining wall block for constructing a retaining wall according to the invention;

FIG. **2** is a top plan view of the retaining wall block of FIG. **1**;

FIG. **3** is a perspective view as seen from the upper right front of a top block for constructing a retaining wall according to one embodiment of the invention;

FIG. **4** is a right side elevational view of the top block of FIG. **3**;

FIG. **5** is a perspective view as seen from the upper right front of an end top block for constructing a retaining wall according to a further embodiment of the invention;

FIG. **6** is a perspective view as seen from the upper right front of a drain ditch top block for constructing a retaining wall according to a further embodiment of the invention;

FIG. **7** is a right side elevational view of the top block of FIG. **6**;

FIG. **8** is a perspective view as seen from the upper right front of a planter block for constructing a retaining wall according to a further embodiment of the invention;

FIG. **9** is a right side elevational view of the planter block of FIG. **8**;

FIG. **10** is a cross sectional view through one embodiment of a seven tier retaining wall constructed with blocks according to the invention;

FIG. **11** is a cross sectional view through a further embodiment of a ten tier retaining wall constructed with blocks according to the invention, with four tiers of planter blocks and topped with a drain ditch block;

FIG. **12** is a fragmentary perspective view of a stepped retaining wall according to a further embodiment of the invention;

FIG. **13** is a fragmentary perspective view of a landscape area including two serpentine retaining walls according to the invention;

FIG. **14** is a perspective view of a top block for a free standing wall according to the invention;

FIG. **15** is a perspective view of a half top block for a free standing wall;

FIG. **16** is a perspective view of an intermediate tier block for a free standing wall according to the invention;

FIG. **17** is a perspective view of a half intermediate tier block for a free standing wall;

FIG. **18** is a perspective view of a lowermost tier or base block for the base of a free standing wall;

FIG. **19** is a perspective view of a half base block for a free standing wall;

FIG. **20** is a top plan view of a free standing retaining wall wherein the blocks are illustrated as having the shape of a right trapezoid in plan.

## DETAILED DESCRIPTION OF THE INVENTION

The invention is directed to concrete blocks for manufacturing retaining walls of various configurations and to retaining walls manufactured from such blocks. FIGS. **1** and **2** illustrate a basic block **10** for use in constructing a retaining wall according to the invention. The block **10** is suitable for use in tiers of a retaining wall other than the uppermost or top tier. The block **10** has a rectangular front face **11** which is textured and, optionally, may be colored to represent various types of stone and rock. The block **10** has left and right sides **12** and **13**, a rear **14**, a top **15** and a bottom **16**. Preferably, the block **10** is trapezoidal in plan with the front face **11** and the rear **14** substantially parallel. By making the length of the rear **14** shorter than the length of the front face **11** and by angling at least one of the sides **12** and **13** slightly towards the center of the rear **14** of the block **10**, a curved retaining wall may be constructed with the front faces **11** of adjoining blocks **10** abutting.

Optionally, a wire or rod **17** may be embedded in the block **10** to have a portion **18** which extends across a recess **19** formed in the top **15**. The rod portion **18** is adapted to be engaged with a block lifting mechanism, such as a chain connected to a fork lift or a backhoe. The rod portion **18** facilitates lifting the block **10** with the top **15** and bottom **16** substantially horizontal for transporting the block **10** and for constructing a retaining wall. Preferably, a rod **20** also is embedded in the block **10** to form a loop **21** which extends beyond the rear **14**. The block **10** is cast with its front face **11** down in a form (not shown). The loop **21** facilitates lifting the block **10** from the form after it has cured. Either in addition to or as an alternative to the rod **17**, grooves **22** and **23** may be formed in the sides **12** and **13** of the block **10** to facilitate lifting the block **10** while it is horizontal with the tines of a fork lift. The grooves **22** and **23** open to the rear **14** and stop short of the front face **11** so as to not be visible at the exposed face of a retaining wall constructed with the blocks **10**.

In order to provide stability to a retaining wall constructed from the blocks **10**, at least one, and preferably two knobs **26** project from the block top **15**. The knobs **26** are located a predetermined distance from the front face **11** and preferably are symmetrically spaced from the sides **15** and **16**. A recess **27** is provided in the block bottom **16**. When a plurality of the blocks **10** are stacked to form a retaining wall, each knob **26** on a lower block is received by a recess **27** in an adjacent upper block **10**. Preferably, the recess **27** is in the form of a groove which extends completely across the width of the block **10** parallel to the front face **10**. The use of two knobs **26** rather than a single rib extending the width of the block **10** facilitates the construction of curved retaining walls.



When a retaining wall constructed from the blocks **10** is to have a substantially vertical face, the recesses **27** and the knobs **26** on the blocks **10** forming the wall will have the same spacing from the front face **11** of each block. If the knobs **26** are spaced further from the front face **11** than the recesses **27**, an upper tier of blocks **10** forming a wall will be spaces to the rear of the adjacent lower tier of blocks **10**. If desired, the front face **11** may be provided with a slight vertical slope. If the knobs **26** have the same space from an upper edge of the front face **11** as the recesses **27** from a lower edge of the front face **11**, the face of the retaining will have the same slope as the front face of the blocks **10**.

FIGS. **3** and **4** show details of a top block **28** for forming the top of a retaining wall according to one embodiment of the invention. The top block **28** has a front face **29** which is preferably textured to simulate a desired type of stone or rock, and optionally may be colored. The front face **29**, sides **30** and **31**, a rear **32** and a bottom **33** of the top block **28** may be the same as for the block **10**. The top block **28** differs from the block **10** in that it has a generally flat top surface portion **34** which is recessed below an upper edge **35** of the front face **29**. Optionally, a rod **36** may be embedded in the block to extend across a recess **37** in the top surface portion **34** for engagement by a lifting mechanism for lifting the block **29** while it is substantially horizontal. Alternately, the recess **37** may be eliminated and the rod **36** may be bent to form a loop extending above the surface **34** while remaining below the upper edge **35**. Also, an optional horizontal grooves **38** may be provided in the sides **30** and **31** to facilitate lifting the horizontal block **29** with the tines of a fork lift. When the top block **28** is located on the top of a retaining wall, the rear side of the retaining wall may be back filled and soil or mulch, for example, may extend over the top surface portion up to the upper edge **35** of the front face **29**. Thus, grass or other vegetation may be planted or mulch may be spread over the top of the retaining wall without a risk of it washing over the retaining wall in a heavy rain.

Referring to FIG. **5**, an end top block **40** is shown according to a further embodiment of the invention. The end top block **40** is similar to the top block **28**, except that a right side **41** of the end top block **40** extends at right angles to a front face **42** of the block **40**. Both the front face **42** and the right side **41** are textured and may be colored to simulate a desired rock or stone. The front face **42** has an upper edge **43** which connects with an upper edge **44** of the right side **41**. The block **40** has a top surface portion **45** which is recessed below both upper edges **43** and **44**. A rod **46** is located in a recess in the top surface portion **45** near the center of gravity of the block **40** to facilitate lifting the block **40** in a generally horizontal attitude. The end top block **40** is designed to be used both at the end of an upper tier of a retaining wall and where the upper tier makes a 90° turn. In a retaining wall in which the tiers step down, the end top block **40** also may be used to create an attractive end for each tier. It will be appreciated that a left side **47** of the block **40** may be finished rather than the right side **41**, or that both the left and right sides **47** and **41** may be finished to match the front face **42**. The block **40** includes a recess or groove **48** in a bottom **49** for receiving one or more knobs **26** on a lower block. The recess **48** is spaced from and extends parallel to the front face **42**. The recess **48** stops short of the finished

side **41** and/or **47** so as to not be visible from the front or from the finished sides.

Some areas which have extreme dry and wet seasons and areas which have poor soil percolation are prone to flooding from sudden heavy rains. When a retaining wall is back filled to its top, heavy rains can cause water to flood over the retaining wall and can cause erosion. FIGS. **6** and **7** show a drain ditch top block **50** which can be placed on the top of a retaining wall. The top block **50** is formed to create a drainage ditch which extends along the top of the retaining wall to control the flow of water over the retaining wall. The top block **50** is similar to the top block **28**, in that it has a similar front face **51**, left and right sides **52** and **53**, rear side **54**, and bottom **55**. The front face **51** has an upper edge **56**. The top block **50** differs from the top block **28** in that it has an upper surface portion **57** which is recessed below both the upper edge **56** of the front face **51** and an upper edge **58** of the rear **54** to form a trough which extends parallel to and between the front face **51** and the rear **54**.

When a plurality of top blocks **50** are located in a row along the top of a retaining wall, the recessed top portions **57** form a drainage ditch extending along the top of the retaining wall. It should be appreciated that the drainage ditch may extend along either the entire length of top of the retaining wall or along only a portion of the top of the retaining wall. The drainage ditch may continue to one or both ends of the retaining wall, or it may connect at one or more points along the retaining wall to a storm sewer or to a drain ditch which carries surface water away from the retaining wall.

Referring to FIGS. **8** and **9**, a planter block **60** is shown according to a further embodiment of the invention for use in constructing retaining walls. The planter block **60** has a front face **61** which is preferably textured to imitate the appearance of a desired type of stone or rock, left and right sides **62** and **63**, a rear **64**, a top **65** and a bottom **66**. The front face **61** has an upper edge **67**. A trough **68** is formed in the top **65** of the block **60** to extend adjacent to, parallel to and substantially below the upper edge **67**. The trough **68** extends between the sides **62** and **63**. The bottom **66** of the block **60** has a recess **69**, and at least one and preferably two knobs **70** project from the top **65** to the rear of the trough **68**. As clearly shown in FIG. **9**, the knobs **70** have a greater spacing from the front face **61** than the recess **69**.

When a row of the planter blocks **60** is stacked in a retaining wall tier above a tier formed from the blocks **10**. the front face **61** of the block **60** will be positioned above and adjacent the front face **11** of the block **10**. When a row of the blocks **10** are stacked above a retaining wall tier formed from the planter blocks **60**, the front faces **11** of the blocks **10** will be stepped behind the front faces **61** of the blocks **60** sufficiently to expose at least a portion of the trough **68**. The trough **68** is then filled with soil for planting, for example, flowers, small bushes or vines which will grow over the retaining wall. The step back in the face of the retaining wall at a tier formed from the planter blocks **60** also provides increased stability to the retaining wall, permitting construction of the retaining wall to a greater height.

For stability, retaining walls are constructed with the blocks staggered in adjacent tiers, in a manner similar to constructing a brick wall. Thus the seam between two abutting blocks in a wall is located below and above the center of blocks in adjacent upper and lower tiers, respectively. Although not illustrated, it will be appreciated that half width blocks may be provided for each of the blocks **10**, **28**, **40**, **50** and **60** to finish the end of a retaining wall.

FIG. **10** is a cross section through an exemplary retaining wall **73** constructed with tiers of the basic blocks **10** and topped with a tier of top blocks **28**. Optionally, the wall **73** may be supported on a poured concrete footer **74**. Alternately, the wall **73** may be constructed on a footing of a suitable packed and leveled granular bearing material. Base blocks **10'** may be used in the lowermost tier which are identical to the blocks **10**, except that they do not have a bottom recess **27**. It will be apparent that the recess **27** is not needed in the lowermost tier of blocks. Also, for higher retaining walls the omission of the recess **27** gives a greater flat bearing surface for supporting the retaining wall. Preferably, a geotextile wrapped perforated drain **75** is installed behind the base of the blocks **10'** in the lowermost tier. After the lowermost tier of the blocks **10'** is installed, tiers of the blocks **10** set in place, with the seams between the blocks in each tier staggered from the seams in the adjacent tiers. As the tiers of blocks **10** are installed, the area between the blocks **10'**, **10** and the existing soil **76** is filled with a free draining aggregate **77** and the aggregate **77** is tamped. Finally, the uppermost tier of the wall **73** is formed with a row of top blocks **28** and, optionally, top soil **78** is spread over the surface up to the upper edge **35** of the front face of the top blocks **28** to complete the retaining wall **73**. In some installations, mulch, gravel or paving may extend over the top blocks **28** up to the upper edge **35**.

FIG. **11** illustrates an exemplary retaining ten tier retaining wall **80**. The illustrated retaining wall **80** constructed from a lower tier of blocks **10'**, alternating tiers of planter blocks **10** and basic blocks **10**, and topped with a drain ditch top block **50**. Because of the planter blocks **60**, the retaining wall **80** will have a general slope rather than the substantially vertical retaining wall **73** of FIG. **10**. The illustrated retaining wall **80** has four tiers formed from planter blocks **60**. The troughs in the planter blocks **60** are filled with top soil **81** and plants **82**, such as flowers, vines or small bushes. A geotextile fabric wrapped perforated drain **83** is positioned behind the base of the lowermost tier of blocks **10'** and is surrounded by stone. An area between the retaining wall **80** and the existing soil **85** is filled with a compacted, free draining aggregate **84**. Topsoil **86** or other desired surface material may be placed above the existing soil **85** to extend up to the upper rear edge **58** of the top block **50**. It should be appreciated that a retaining wall may be constructed with one or more tiers of planter blocks **60** separated by one or more tiers of blocks **10** to provide a desired appearance and slope.

FIG. **12** is a fragmentary illustration of a stepped retaining wall **88** arrangement formed from base blocks **10'**, blocks **10**, top blocks **28**, and end blocks **40'**. The end blocks **40'** are identical to the end blocks **40**, except that both left and right sides of the end blocks **40'** are finished and of the same height as the front face. The retaining wall **88** has a lowermost tier of base blocks **10'**. In the portion of the retaining wall **88** nearest the lower center of FIG. **12**, the retaining wall is only two tiers high, with the upper tier formed from a top block **28**. Where the wall is three or more tiers high, blocks **10** form the intermediate tiers, and top blocks **28** form the upper tier. An end block **40** is used at the end of each tier. In the illustrated wall **88**, the end blocks **40** are rotated 90° so that the longer front face **42'** extends perpendicular to the front face of the wall **88**. The area immediately adjacent the top blocks **28** and the end blocks **40'** is shown covered with mulch **89**, and bushes **90** are planted behind the mulch **89**. In the illustrated wall **88**, a sidewalk **87** is poured up to the lowermost tier of blocks **10'**.

As indicated above in the description of the basic wall blocks **10**, the blocks **10** are generally trapezoidal in plan.

This allows forming curved retaining walls with the front faces of adjacent blocks **10** abutting. FIG. **13** illustrates an exemplary landscape area **91** formed from a serpentine lower retaining wall **92** and a serpentine upper retaining wall **93**. The serpentine lower retaining wall **92** is formed from a tier of top blocks **28** and, where the wall **92** has two tiers, a lower tier formed from blocks **10'**. The number of tiers in the lower wall **92** is selected to provide a horizontal upper edge to the lower wall **92**. If necessary, a portion of the lowermost tier of blocks may be partially buried. A portion of the illustrated lower wall **92** is one tier high and a portion is two tiers high to compensate for elevational changes in the surrounding terrain. The illustrated upper wall **93** is two tiers high. For aesthetics, the upper wall **93** has a different serpentine arrangement from the lower wall. Areas between the walls **92** and **93** and the area above the upper wall **93** are landscaped with mulch and bushes.

It should be appreciated that the above described retaining wall blocks may be modified for constructing a free standing wall which is finished on both sides. FIG. **14** shows a top block **95** having a finished front face **96** and a finished rear face **97**, and FIG. **15** shows a half width top block **95'**. The top of the top blocks **95**, **95'** may be recessed, as shown, to permit growing landscape plants on top of the wall, or it may be flat (not shown). FIG. **16** shows a basic or intermediate tier block **98** having a finished front face **99** and a finished rear face **100**, and FIG. **17** shows a half width intermediate tier block **98'**. FIG. **18** shows a bottom tier block **101** having a finished front face **102** and a finished rear face **103**, and FIG. **19** shows a half width bottom tier block **101'**. The blocks **95**, **98** and **101** may be formed to be rectangular in plan if a straight wall is to be constructed, or trapezoidal in cross section if curved walls are to be constructed. Curved and straight walls are created by selecting the orientation of the blocks. If alternate blocks are reversed so that the shorter finished face of adjacent blocks are on opposite sides of the wall, the wall will be straight. If the shorter finished faces of two adjacent blocks abut, the wall will curve. The blocks **95**, **98** and **103** also may be formed to have a shape in plan of a right trapezoid, wherein one end is perpendicular to the sides, as shown in the top plan view of a section of a free standing wall **104** in FIG. **20** formed from blocks **105**.

It will be appreciated that various modifications and changes may be made to the above described preferred embodiments of retaining wall blocks and retaining walls constructed from such blocks without departing from the scope of the following claims.

What is claimed is:

**1**. A planter block for use in a retaining wall formed from tiers of blocks, at least some of the blocks in the wall having a bottom recess spaced a predetermined distance to the rear of a front face on such blocks, said planter block having a textured front face having an upper edge, two sides, a rear, a top and a bottom, a trough recessed in said top to extend substantially parallel to said front face and to extend to the rear of and below said upper edge, said trough having a size and shape sufficiently receiving soil and plants, and at least one projection means on said top spaced to the rear of said trough and a distance from said front face of said planter block greater than the predetermined distance for engaging a bottom recess in a block which is placed in an adjacent upper tier when said planter block is installed in a retaining wall, whereby at least a portion of said trough will extend forward from the front face of a block placed on said planter block in an adjacent upper tier of such wall with a bottom groove in such block receiving said at least one projection means.

**2**. A planter block for use in a retaining wall, as set forth in claim **1**, and further including a member embedded in said planter block and having a portion forming a hook for lifting said top block from said top.

**3**. A planter block for use in a retaining wall, as set forth in claim **2**, and wherein said member is embedded in said planter block with said portion located in said trough.

**4**. A planter block for use in a retaining wall, as set forth in claim **2**, and wherein said member is embedded in said planter block with said portion located in a recess in said trough.

**5**. A planter block for use in a retaining wall formed from at least two tiers of blocks, at least some of the blocks in the wall having a bottom recess spaced a predetermined distance to the rear of a front face on such blocks, said planter block having a textured front face having an upper edge, two sides, a rear, a top and a bottom, a trough formed in said top to extend substantially parallel to said front face adjacent and below said upper edge, said trough having a size and shape sufficiently soil and plants after said planter block is positioned in a retaining wall, and at least one top projection means on said planter block spaced to the rear of said trough a distance greater than the predetermined distance for engaging a bottom recess in at least one block placed in an adjacent upper tier of a wall, whereby when said at least one top projections is received by a recess in at least one block in an adjacent upper tier of blocks the front face of such at least one block will be positioned sufficiently behind said front face of said planter block whereby said trough is open in front of the front face of the at least one block for receiving and growing plants in soil placed in said trough.

**6**. A planter block for use in a retaining wall, as set forth in claim **5**, and wherein said planter block has a generally trapezoidal shape in plan with said front face and rear substantially parallel and said rear shorter in width than said front face.

**7**. A planter block for use in a lower tier of two tiers of blocks in a retaining wall with blocks in an upper tier having a face, a bottom, and at least one recess in the bottom a predetermined distance behind the face, said planter block having a front face having an upper edge, a top, a bottom, left and right sides and a rear, at least one projection extending above said top at a first distance behind said front face greater than the predetermined distance, said at least one projection having a size smaller than the at least one recess whereby said at least one projection can be received by a recess in an upper tier block when such block is placed on said planter block, a trough formed in said top between said at least one projection and said front face to extend generally parallel to said front face, said trough having a size and shape sufficiently receiving soil and plants, and wherein at least a portion of said trough is spaced towards said front face from said at least one projection by a distance greater than the predetermined distance.

**8**. A planter block for use in a retaining wall, as set forth in claim **7**, and further including a member embedded in said planter block and having a portion extending into said trough to form a hook for lifting said top block from said top.

**9**. A planter block for use in a retaining wall, as set forth in claim **7**, and wherein said planter block has a generally trapezoidal shape in plan with said front face and rear substantially parallel and said rear shorter in width than said front face.

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